BYL-719

Cat. No.: A8346  
CAS No.: 1217486-61-7  
Formula: C19H22F3N5O2S  
M.Wt: 441.47  
Synonyms: BYL 719; BYL719  
Target: PI3K/Akt/mTOR Signaling  
Pathway: PI3K  
Storage: Store at -20°C

Solvent & Solubility

≥22.07 mg/mL in DMSO; insoluble in H2O; insoluble in EtOH

<table>
<thead>
<tr>
<th>Mass</th>
<th>Solvent Concentration</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>2.2652 mL</td>
<td>11.3258 mL</td>
<td>22.6516 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.4530 mL</td>
<td>2.2652 mL</td>
<td>4.5303 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2265 mL</td>
<td>1.1326 mL</td>
<td>2.2652 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary: Selective PI3Kα inhibitor

IC₅₀ & Target: 5 nM (PI3Kα)

Cell Viability Assay

Cell Line: Multiple myeloma cells (OPM1, OPM2, RPMI8226, U266, MM1s,MM1R) and NCI-H9290

Preparation method: Limited solubility. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions: 37°C
Applications: BYL719 prominently decreases the activation of the PI3K signaling proteins (pAKT, pS6R, and pGSK), this effect are also observed in slio that BYL719 decreases the expression of the PI3K signaling proteins in a dose-dependent manner. Furthermore, BYL719 dose-dependently triggers G1 arrest and induces apoptosis in MM cells.

In Vivo

Animal experiment

Animal models: 5-week-old male C57Bl/6J mice transplanted with human osteoblastic osteosarcoma

Dosage form: Oral administration, 12.5–50 mg/kg daily

Applications: BYL719 significantly reduces tumor volumes in a dose-dependent manner and reduces the tumor ectopic bone. In addition, BYL719 decreases the surface of TRAP+ osteoclasts without affecting the number of osterix+ cells. Moreover, BYL719 decreases of KI67+ cell number and reduces tumor vascularization.

Other notes: Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations


References


Caution

FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt
of the product, follow the storage recommendations on the product data sheet.